

BEFORE THE  
POSTAL REGULATORY COMMISSION  
WASHINGTON, D.C. 20268-0001

Priorities for Future Data Collection  
and Analytical Work Relating to  
Periodic Reporting

Docket No. RM2011-3

RESPONSES OF THE UNITED STATES POSTAL SERVICE TO  
QUESTIONS 1-3 OF CHAIRMAN'S INFORMATION REQUEST NO. 1  
(August 23, 2011)

The Postal Service hereby files its responses to questions 1-3 posed in  
Chairman's Information Request No. 1, issued on August 2, 2010. Each question is  
stated verbatim, and followed by the response.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

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**RESPONSE OF THE UNITED STATES POSTAL SERVICE  
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

1. To help the Commission evaluate what alternative approaches to collecting up-to-date carrier street time data of sufficient quality to support econometric modeling may be available, please compare the quality, reliability, and comprehensiveness of the following datasets for econometrically modeling the variability of carrier street time, taking into account the concerns articulated by witness Bradley in Docket No. R2006-1:
  - a. the FY 2002 CCSTS data that the Postal Service filed in Docket No. R2005-1;
  - b. the FY 2004 CCSTS data that the Postal Service filed in Docket No. R2006-1;
  - c. the Smith Dataset supplied by the Postal Service in Docket No. R2006-1; and
  - d. 2 representative weeks of regularly collected DOIS data in FY 2011.

**Response:**

The key issue to resolve when considering updating city carrier street time costs in the current environment is how to obtain sufficiently accurate data on a cost effective basis. The previous special studies (the "FY2002" and "FY2004" data sets referred to in the question) provided data of sufficient quantity and accuracy to meet the Commission's standard for estimating street time volume variable costs. However, the data collection efforts involved in such studies are very expensive. Moreover, although the Commission accepted the data, it expressed some concerns about the quality of the data and resolving those concerns would make the data collection efforts even more expensive.

On the other hand, certain city carrier street and office data are collected routinely within the Delivery Operations Information System (DOIS) and are available at minimal additional cost. However, the collected data have some significant limitations. First, the data collected are operational data and are not routinely subject to the high

**RESPONSE OF THE UNITED STATES POSTAL SERVICE  
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

level of data accuracy checks associated with Commission standards. Thus a quality analysis of the data would have to be undertaken and, if necessary, additional data quality procedures would have to be implemented. Second, DOIS does not provide all the data necessary for updating the city carrier street time analysis. Recall that CCSTS data are used for two purposes, estimating the size of the city carrier street time activity cost pools and, where appropriate, estimating the variabilities for those cost pools. The following table presents the current street time cost pool proportions which are based upon the FY2002 CCSTS data:

<b>Activity</b>	<b>Proportion of Street Time</b>
LOOP/FOOT DELIVERY	33.50%
CURBLINE DELIVERY	14.52%
NDCBU DELIVERY	5.66%
VIM DELIVERY	0.23%
CENTRAL DELIVERY	6.64%
DISMOUNT DELIVERY	11.70%
PARCEL/ACCOUNTABLE DELIVERY	5.13%
GENERAL COLLECTIONS	0.24%
EXPRESS COLLECTIONS	0.02%
DEVIATION DELIVERY TRAVEL	0.52%
TRAVEL TO/FROM ROUTE	9.10%
NETWORK TRAVEL	11.38%
RELAY	1.36%

The daily street time hours from DOIS, like those contained the "Smith Dataset," provide the total recorded street time for each route but do not provide any of the required detail necessary to estimate the cost pools. The daily recorded volume provides measures of

**RESPONSE OF THE UNITED STATES POSTAL SERVICE  
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

DPS letters, FSS flats, cased letters and flats, sequenced mail, and parcels. But it does not provide separate estimates for "small" and "large" (deviation) parcels and it does not provide a measure of accountables. Similarly it does not record collection volumes.

This means that additional data collection efforts would be necessary for estimating the delivery variabilities for collections, parcels and accountables. Finally, it is important to note that DOIS is an ongoing operational data system that the Postal Service uses to manage its city carrier delivery network. Thus, the variables in DOIS are constructed with that goal in mind. For example, if they are not cased, Detached Address Labels (DALs) are not separately recorded because management does not credit them as part of a route's office workload.

This is not to say that there is no value in using data from the DOIS or that such data could not be acceptable in a study of city carrier street time costs. Given that the Postal Service is already expending considerable resources to collect city carrier street time data, it would be sensible to carefully investigate how such data could be used. However, a study of city carrier street time costs is necessarily complex and a menu of issues must be addressed in identifying how data from DOIS could be used, what modifications of existing systems could be sensibly made and what additional data collection efforts would be required. If the Commission wishes to update the city carrier street time cost model, a reasonable approach would be to first initiate a small pilot study which would be designed to develop an acceptable study plan and establish acceptable data collection protocols.

**RESPONSE OF THE UNITED STATES POSTAL SERVICE  
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

- a. The FY2002 CCSTS data were vetted by the Commission and found to have acceptable quality, reliability, and comprehensiveness. The data set satisfied all twelve of the criteria listed in the appendix.
- b. Although not officially vetted by the Commission, the FY2004 CCSTS data set was based upon improved data collection procedures that reflected some of the concerns expressed by the Commission about the FY2002 data set. It is likely therefore, that the FY2004 data set had acceptable quality, reliability and comprehensiveness. The data set satisfied all twelve of the criteria listed in the appendix.
- c. The "Smith Dataset" was not sufficiently comprehensive to permit estimating the necessary variabilities and/or cost pools. There was no reported analysis of its quality or reliability. There was also no reported evaluation of the twelve criteria listed in the appendix.
- d. If the question refers to the daily street hours and volumes currently recorded in DOIS, the data are not sufficiently detailed to permit estimating the necessary variabilities and/or cost pools. Below is a listing of the twelve criteria and a discussion of how the DOIS currently addresses each.

**1. Ascertaining the extent to which the Postal Service had difficulty collecting, measuring, standardizing, cleaning, or processing the data used.**

Because it collects data on an ongoing basis, DOIS has no general difficulties in collecting volume and time data by route each day. However, the volume data entered into DOIS can only be edited through the following delivery day. Time

**RESPONSE OF THE UNITED STATES POSTAL SERVICE  
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

data are collected through the Postal Service's Time and Attendance Control System (TACS). The time data can only be edited within the same delivery week.

**2. Identifying any corrections, modifications, or changes in the data collection process made by the Postal Service over the sample period.**

Given that a two week sample period is proposed in the question, it is unlikely that the Postal Service would be making any corrections, modifications, or changes in the current data collection process. This is not to say that there have been no refinements or modifications to the data collection process in DOIS. For example, the End of Run (EOR) interface to DOIS (which measures DPS letters and FSS flats) was changed to automate the entire process, eliminating the need for user intervention except for any editing volumes as needed. Similarly the TACS interface with DOIS was enhanced for technical reasons; however the change did not require any different procedures by the users.

**3. Determining whether the data includes special purpose routes as well as letter routes.**

For special purpose routes, only time information for each route is regularly maintained by DOIS.

**4. Determining whether zero time or zero volume values for a given zip/route/day reflect actual non-delivery, non-collection of data, or deletion of data.**

Data within DOIS should not have zero time or zero volume values for routes on a regular delivery day. If there are system issues on a particular day, an effort is made to preserve and enter any data that have been collected. Please note that when there are zeroes recorded on a normal delivery day, it is assumed that the

**RESPONSE OF THE UNITED STATES POSTAL SERVICE  
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

route was delivered and the data were not entered for some reason, such as system breakdown or user neglect.

**5. Determining whether missing individual route/carrier-day observations or ZIP Code observations were either not collected or were subsequently scrubbed.**

The data within DOIS should not have missing observations for routes on a regular delivery day. However in rare instances issues do arise with either source system, EOR or TACS, which may result in missing or zero observations for some routes.

**6. Determining what quality control or data manipulation procedures were applied to the raw data.**

DOIS does not have specific quality control or data manipulation protocols although the data are reviewed for reasonableness. As explained above, volume data in DOIS can be edited through the next delivery day and the time data in DOIS can be edited through TACS during the same service week.

**7. Determining how street hours were measured and by whom.**

DOIS measures street hours via carrier clock rings in TACS.

**8. Determining whether there were any changes in how the street hours variable was defined over the sample period.**

Given that a two week sample period is proposed in the question, it is unlikely that the Postal Service would be making any changes in how street hours are defined. For example, DOIS has not changed the way that street hours are measured since FY2006.

**RESPONSE OF THE UNITED STATES POSTAL SERVICE  
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

**9. Determining how parcels or sequenced letters were defined in collecting volume data, and the extent to which the data matches these definitions.**

In DOIS, a parcel is defined as anything over 2 lbs. Lighter parcel shaped pieces, such as medications, are separately counted and included with the cased flats. Sequenced mail is entered into DOIS as either letters or flats, but is reported as a single entity (sequenced pieces), based on the number of residential deliveries on that route. If DALs are cased, the number (obtained from mailing statement) is included with cased letters. If DALs are taken directly to the street, then they are not included separately from their host pieces.

**10. Determining if there were changes in the way that data on the volume of Cased Letters, Cased Flats, Automated Flats, DPS'd Letters or Sequenced Mail were collected over time, or across ZIP codes or routes, during the sample period.**

Given that a two week sample period is proposed in the question, it is unlikely that the Postal Service would be making any changes in how the data on Cased Letters, Cased Flats, FSS Flats, DPS'd Letters or Sequenced Mail are collected over time, or across ZIP Codes or routes. Please note that DOIS uses machine counts for DPS letters and FSS flats. Cased letters and flats are linearly measured (in quarter foot increments) and converted to pieces. Heavier parcels are individually counted by the carrier supervisor. Lighter parcels are individually counted and included with cased flats. Sequenced volume is entered as "sets" by the supervisor, with one set equaling one piece for each residential delivery on the route. It can be entered as either letters or flats, and DOIS converts to pieces based on the number of residential deliveries.



**RESPONSE OF THE UNITED STATES POSTAL SERVICE  
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

**11. Determining what specific quality control procedures were applied to collection of the volume data described in criteria 10.**

DOIS does not have specific quality control protocols. In standard practice, DOIS volumes are only adjusted in situations where the entry is discovered to be extremely inaccurate.

**12. Determining whether the data included data for Sunday and holidays.**

Generally, only special purpose routes operate on a Sunday or holiday. For these routes, time but not volume information is available because DOIS does not record volumes for special purpose routes.

**RESPONSE OF THE UNITED STATES POSTAL SERVICE  
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

2. Please refer to the Attachment to this CHIR.
- a. Please explain the extent to which the quality control measures referenced in the Attachment would normally have been applied to operational DOIS data, paying particular attention to the 4 most recent years in which those data have been collected;
  - b. If the quality control measures referenced in the Attachment were not normally applied, please identify the steps required to apply those measures to historical data;
  - c. Please estimate the cost of the steps identified in question 2.b. if they were to be applied to a 2-week sample of such data in any recent quarter;
  - d. Please explain whether "cleaned up" historical DOIS data could be or would be suitable for estimating shape-based street time variabilities, or whether suitably "clean" DOIS data could only be obtained by modifying future data collection practices;
  - e. Please explain how regularly collected operational DOIS data would need to be or supplemented to make that data an appropriate source for estimating shape-based variabilities; and
  - f. Please estimate the cost to collect the information referenced in question 2.e. for a 2-week sample.

**Response:**

- a. DOIS does not have specific quality control protocols. In standard practice, DOIS volumes are only adjusted in situations where the entry is discovered to be extremely inaccurate.
- b. To the extent that additional quality control procedures are required for cost study purposes but are unnecessary for operational purposes, it would not be efficient to put them in place permanently for the entire DOIS data collection efforts. This would impose and unnecessary costs on the Postal Service. Instead, it would be more efficient to impose them temporarily during a special data collection effort to support a costing study.

**RESPONSE OF THE UNITED STATES POSTAL SERVICE  
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

- c. The cost of putting the additional quality control measures in place would depend upon how extensive they are and how they would differ from current DOIS procedures. The cost of putting them in place could be estimated during a pilot study of using the DOIS to support a special costing study.
- d. Given the many changes that have taken place in the city carrier delivery environment it would appear to be inefficient to attempt clean up historical data extracted from DOIS. Even if the data were sufficiently "clean," they would still be dated and would not reflect the current operating environment. In contrast, it does seem feasible to study what would be necessary to review or supplement existing data that could be extracted from DOIS. Given this, it appears to make more sense to put any necessary data collection changes in place before collecting current data rather than expending resources attempting to remediate dated historical data.
- e. One issue that would need to be addressed would be the addition of data on certain volume variables not included in the DOIS data base such as collection volume and accountable volume. Another issue would be finding a way to modify total street time so that variabilities for the relevant cost pools could be estimated. As a general matter, it would be sensible to contemplate any required changes in DOIS as part of a small pilot study of updating the city carrier street time cost analysis.
- f. The cost of obtaining the information necessary to update the city carrier street time analysis would depend upon a number of issues like the size of the sample,

**RESPONSE OF THE UNITED STATES POSTAL SERVICE  
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

the method of data collection, the ability to work with existing Postal Service data collection efforts, the required level of accuracy, and the required quality control procedures. Thus, one would need to determine the nature of a proposed study, perhaps through a small pilot study, before one could estimate the cost.

**RESPONSE OF THE UNITED STATES POSTAL SERVICE  
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

3. To the extent feasible, please compare the benefits of updating the city delivery carrier street time variability model using:
- a. the FY 2004 CCSTS data that the Postal Service filed in Docket No. R2006-1;
  - b. the Smith Dataset supplied by the Postal Service in Docket No. R2006-1; and
  - c. DOIS data sampled over 2 representative weeks toward the end of FY 2011.

**Response:**

a. & b. Because of there have been many substantial changes in city carrier delivery since these data sets were collected, there would appear to be little benefit from updating the city carrier street time model with either one. The changes that have taken place include:

- An increased percentage of the mail that is delivery point sequenced. This has reduced office time and increased street time. For example, in FY2010, street time represented 73 percent of city carrier delivery costs
- Introduction of the Flats Sequencing System (FSS) and the use of FSS street trays
- A significant reduction in volume delivered on city carrier routes. According to the City Carrier Cost System (CCCS) data the volume delivered by city carriers in FY2010 was 18 percent below its value in FY2006.
- The decline of detached address labels (DALs)
- An ongoing transition from door delivery to cluster box delivery
- A reduction in the number of city carrier routes accompanied by an increase in the number of city carrier delivery points which increases the number of delivery points per route.
- Operational changes in the handling of parcels

**RESPONSE OF THE UNITED STATES POSTAL SERVICE  
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

Additionally, because of its deficiencies, there is really no benefit from attempting to use the "Smith Dataset." As explained in the response to Question 1, the "Smith Dataset" is missing many of the parts essential for updating city carrier street time costs. Moreover, it does not have the variables necessary for even updating just the variabilities. For example, it does not contain an estimate of regular delivery time, which is the dependent variable in the primary variability regression.

- c. While it makes sense to update the city carrier analysis using more timely data, the regular DOIS data referenced in the question suffers from a deficiency in terms of coverage and possibly a deficiency in terms of quality. A reasonable approach to evaluating the benefits of using these data in updating city carrier street time costs is to undertake a small pilot study that would examine issues like:

- Analysis of data quality in DOIS daily volume data (DPS and FSS volumes are from machine counts and should be accurate.)
- Investigation of the possibility of using route evaluation data 3999 to estimate cost pools.
- Consideration of alternative cost pool structures that would be consistent with efficient data collection.
- Investigation of the use of Managed Service Point (MSP) scans to identify delivery time and/or estimate cost pool percentages.
- Identification of the implication of operational and structural changes for the data collection effort.
- Investigation of the minimum number of ZIP Codes that could be included in the sample that is still sufficiently accurate. The 2004 data collection

**RESPONSE OF THE UNITED STATES POSTAL SERVICE  
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

effort seemed to suggest it is possible to reduce the sample size and such a reduction could substantially reduce the size of the sample.

- Collaboration with the Commission to ensure data collection effort is acceptably accurate.
- Investigation of the cost of instituting data quality controls on the DOIS data collection process for specific ZIP codes.

### **CERTIFICATE OF SERVICE**

I hereby certify that I have this date served the foregoing document in accordance with Section 12 of the Rules of Practice and Procedure.

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